

Application summary

Application title

This is the title of your proposed project.

Proposed duration of funding (months)

State in months the total period for which you are seeking support (Master's training and research component). Your salary and all research costs must end at the same time.

Proposed start date

You should submit your application at least six months before your proposed start date.

Depending on when you submit your application, it will take between four and six months to process. You should take into account the meeting dates of the relevant funding committee.

Name of administering organisation

If your application is successful, this is the organisation that will be responsible for administering the award.

Lead applicant's address at administering organisation

If your application is successful, we will use this address in your award letter.

Department/Division

Organisation

Street

City/Town

Postcode/Zipcode

Country

Master's course and training programme

Your sponsor should plan the content of the Master's course and training in consultation with the training centre. Master's research training could be formal taught courses, part-time, modular, or distance learning programmes. Your Master's course should last no longer than 12 months.

Title of Master's course

Name of university where Master's course will be undertaken

This should be an internationally-recognised centre of excellence in research training, chosen by you and your sponsor. The training centre can be either in the country of the administering organisation or abroad.

Is this a distance learning course?

What is the duration of the Master's course (months)?

Research area

Select the most relevant area, based on the key aims of the research. This allocates your application to the relevant Grants team. We may reallocate your application to another area if we consider it appropriate.

Lead applicant

Lead applicant details

Full Name	
Department	
Division	
Organisation	
Address Line 1	
City/Town	
Postcode	
Country	
Telephone No.	
Email Address	

ORCID iD

ORCID iD

Career history (current/most recent first)

From	To	Position	Organisation

Education/training

From	To	Qualification	Subject	Organisation

Source(s) of personal salary support

State all your sources of salary funding (for example, through your organisation's block grant from a higher education funding body), and the percentage of your salary they contribute. Answer 'not applicable' if you are not currently employed.

Your source of salary may affect your eligibility - please check the scheme webpage.

If your source of salary places any restrictions on intellectual property rights or publications arising from your research, contact us as this may also affect your eligibility.

Current/last appropriate salary details

If you are currently unemployed give salary details from your most recent employment.

Salary grade

Basic salary (per annum)

Currency

Date of last increment

Proposed starting salary for Fellow (£)

Basic starting salary: annual salary to be paid to the individual upon their appointment to the post, exclusive of any allowances for which the individual is eligible. If the post is part-time, the annual salary must be quoted on a pro-rotta basis.

Clinical status

Are you a healthcare professional?

Indicate your healthcare profession

Are you clinically active?

What is your specialty?

If your specialty is not on the list, select 'Other' and specify.

Specify

Career breaks

Have you taken any career breaks or periods of part-time work, for example parental, long-term sick leave, carer responsibilities?

We encourage applications from researchers who have taken career breaks. We want to ensure that any such breaks are taken into account when we consider your track record. State when and for what period you took a break, or were working part-time. We are not asking for the reasons for this break so please do not provide these here, including sharing any sensitive personal health information.

Provide details

Do you wish to undertake this award part-time?

If you wish to undertake this award part-time, either from the start or part way through the grant, your host organisation must employ you on a part-time basis during that time.

We provide flexible research career opportunities. If you're applying for funding, you can request flexible and part-time working. This could be to help you manage family commitments or if you have individual needs which make undertaking an award full time challenging.

We always try to accommodate requests, as long as your employing organisation agrees to the working arrangement. Your Grants Adviser will contact you to acknowledge receipt of your application after the scheme application deadline; you should discuss any flexible working plans with them as early as possible. If you have any questions before you apply, please contact our Grants Information Desk.

Provide a summary of your research career to date. Include research projects you have undertaken as part of a degree or during vacation scholarships, highlighting any key achievements. (700 words max.)

Explain why you want to undertake an International Master's Fellowship. How will this further your career? Why did you choose your specific degree course, training centre(s) and research supervisor? (700 words max.)

Research outputs

List up to 20 of your most significant research outputs, ensuring that at least five of these are from the last five years. For 10 of these outputs, provide a statement describing their significance and your contribution (up to 50 words per output).

Research outputs may include (but are not limited to):

- Peer-reviewed publications and preprints
- Datasets, software and research materials
- Inventions, patents and commercial activity

For original research publications indicate those arising from Wellcome-funded grants in **bold**, and provide the PubMed Central ID (PMCID) reference for each of these. Please refer to guidance notes.

Publications should be in chronological order with the most recent first. Please give citation in full, including title of paper and all authors. Citations to preprints should state "Preprint", the repository name and the articles persistent identifier (e.g DOI).*

*(*All authors, unless more than 10, in which case please use 'et al', ensuring that your position as*

author remains clear.)

You should include here systematic reviews (e.g. Cochrane Reviews) and meta analyses, but exclude abstracts and literature reviews. We encourage the inclusion of articles published via open research publishing platforms, such as Wellcome Open Research, providing they have passed peer review.

Preprints, i.e. complete manuscripts that have been submitted to a preprint repository or service (e.g. bioRxiv, PeerJ Preprints, arXiv, SocArXiv or PsyArXiv), can be included only if they have a permanent identifier such as a DOI or arXiv identifier.

The Wellcome Trust's open access policy requires all original peer-reviewed research papers, supported in whole or in part by Trust funding, to be made available through PubMed Central (PMC) and Europe PMC as soon as possible and in any event within six months of the journal publisher's official date of final publication.

The PubMed Central ID (PMCID) is the unique identifier assigned to every full text paper in PubMed Central (PMC) and Europe PMC.

Please note that:

We actively monitor compliance with our open access policy and successful applicants will be asked to provide a full list of all their Wellcome-funded research papers, and confirm compliance by providing the PMCID identifier for these, before the award letter can be issued.

For further guidance, please refer to the Trust's open access policy statement and authors' information

How many peer-reviewed publications have you authored/co-authored?

Include systematic reviews and meta analyses but exclude abstracts and literature reviews.

We encourage you to include articles published on open research publishing platforms, such as Wellcome Open Research, providing they have passed peer review.

Current and recent research funding (including Wellcome grants)

List all research funding you have held in the last five years and any key funding before then.

List the most recent first. State the name of the funder, name(s) of grantholder(s), title of the project, total amount awarded (and how much of this you received), your role in the project, and the start and end dates. State the percentage of your time spent on the research; if the grant is active state the number of hours per week that you spend on the research.

Include details of any recurrent or core funding you have held. Explain your role in obtaining the funding. For example, whether you held them in your own right as lead applicant, coapplicant, or as part of a consortium.

We look at your success in getting research funding when we assess your track record. We also want to understand how this proposal is distinct from other funding you hold.

Sponsors

The sponsor must be based at the administering organisation. Your sponsor must nominate you for the Fellowship.

Sponsor details

Full Name

Department

Division	
Organisation	
Address Line 1	
City/Town	
Postcode	
Country	
Telephone No.	
Email Address	

Title of current post

Date of appointment	
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Expected date of termination	
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The sponsor must have a contract of employment at the administering organisation and have their personal support guaranteed.

<p>Source(s) of personal salary support State all your sources of salary funding (for example, through your organisation's block grant from a higher education funding body), and the percentage of your salary they contribute.</p>

<p>Recent publications List up to five publications that you consider the most relevant to this application. Publications should be in chronological order with the most recent first.</p>

<p>Current and recent research funding (including Wellcome grants) List all research funding you have held in the last five years and any key funding before then. List the most recent first. State the name of the funder, name(s) of grantholder(s), title of the project, total amount awarded (and how much of this you received), your role in the project, and the start and end dates. State the percentage of your time spent on the research; if the grant is active state the number of hours per week that you spend on the research.</p>

Include details of any recurrent or core funding you have held. Explain your role in obtaining the funding. For example, whether you held them in your own right as lead applicant, coapplicant, or as part of a consortium.

<p>Sponsor's track record in research mentorship and training Name up to five fellows/students/individuals you have trained, if any. State the dates of employment</p>
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in your group, the position they held (for example, postgraduate student, postdoctoral research assistant) and their current position. Describe your contribution to their career development. Please also indicate how long the PhD took to obtain, explaining any anomalies if applicable.

Programme of training

Describe the programme of training that will be provided for the applicant. Indicating how his/her particular research training needs will be met. Include dates and location of training.

Recommendation

Upload your letter of recommendation. Refer to guidance notes for details of what the letter must cover. (500 words maximum).

The sponsor should give an assessment of the calibre of the applicant and explain how the applicant would complement the ongoing activities of the host environment. This should state why and how the applicant has been selected for this Fellowship and how this Fellowship will help the needs of the applicant's career. Please also indicate how you will fulfil your mentorship responsibilities.

The statement of commitment must confirm that:

- 1. the necessary space and facilities have been agreed and will be made available to the fellow for the Wellcome-funded research from the start of the award and for the award duration;*
- 2. the applicant will have a post at your organisation for the duration of the award;*
- 3. the applicant will be able to focus full time on the activities under this Fellowship and will be released from ongoing duties to achieve this;*
- 4. for core-funded institutions, that the research is distinct from existing core supported activities, and if awarded would not replace or lead to a reduction in existing core support.*

Supervisors

You must have a supervisor at your administering organisation who will be responsible for the day to day supervision of your research project.

You should also have additional supervisors for each period that you spend outside of your host organisation, including the training centre where your taught course will take place.

A supervisor has day-to-day interaction with the Fellow and has immediate responsibility for the direction of the research. They are also primarily responsible for meeting the Fellow's training needs. Where the Fellow is registered for a higher degree, the supervisor is normally the person recognised as the higher degree supervisor by the administering organisation.

The supervisor does not need an established position or guaranteed tenure in his or her post for the duration of the grant. Where this is the case, the sponsor must be able to guarantee continued supervision of the Fellow should the supervisor leave or be unable to act. The sponsor must either take over the supervision directly, or undertake to identify another supervisor suitable and willing to take over .

In many cases, the supervisor may also be the sponsor. If this is the case, the supervisor should not duplicate the CV information he/she has already provided in the 'Sponsors' section of the form. Instead, enter 'See Sponsor information' in the relevant textboxes.

Supervisor details

Full Name

Department

Division	
Organisation	
Address Line 1	
City/Town	
Postcode	
Country	
Telephone No.	
Email Address	

Education/training				
From	To	Qualification	Subject	Organisation

Title of current post

Date of appointment	
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Expected date of termination	
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<p>Source(s) of personal salary support State all your sources of salary funding (for example, through your organisation's block grant from a higher education funding body), and the percentage of your salary they contribute.</p>

<p>Recent publications List up to five publications that you consider the most relevant to this application. Publications should be in chronological order with the most recent first.</p>

<p>Current and recent research funding (including Wellcome grants) List all research funding you have held in the last five years and any key funding before then. List the most recent first. State the name of the funder, name(s) of grantholder(s), title of the project, total amount awarded (and how much of this you received), your role in the project, and the start and end dates. State the percentage of your time spent on the research; if the grant is active state the number of hours per week that you spend on the research.</p>

<p><i>Include details of any recurrent or core funding you have held. Explain your role in obtaining the funding. For example, whether you held them in your own right as lead applicant, coapplicant, or as part of a consortium.</i></p>
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Supervisor's track record in research mentorship and training

Name up to five fellows/students/individuals you have trained, if any. State the dates of employment in your group, the position they held (for example, postgraduate student, postdoctoral research assistant) and their current position. Describe your contribution to their career development. Please also indicate how long the PhD took to obtain, explaining any anomalies if applicable.

Statement of support from the supervisor

Upload a statement of support for this application. This should include the regularity of supervision and supervisory procedures you intend to provide. (500 words maximum).

The letter of support should show clearly the supervisor's name, position and address.

Collaborators

Are any collaborations essential for this proposal? This could be through sharing facilities, providing access to resources (essential reagents, samples, data) or sharing subject-specific knowledge and guidance.

If the answer is 'Yes', you will be asked to provide information about these collaborators and to confirm their willingness to participate in the proposed research.

List any key collaborators (name and organisation) and provide a very brief outline of their role in the proposed research.

You can replace the collaborators named here with suitable alternatives if it is necessary or appropriate to do so.

I confirm that the collaborators named above have agreed to be involved, as described, in the proposed research and are willing for their details to be included as part of this application.

Related applications

Is this or a similar application for funding currently under consideration elsewhere?

We'll consider your application even if you have a similar application being considered by another funder. If the other funder offers you funding, please tell us immediately. We will usually ask you to decide on that offer within one month.

If you decide to apply to another funder with a similar application after you have applied to us, please also let us know.

Provide the name(s) of the funder(s) and the expected decision date(s)

Is this a resubmission of an application submitted to Wellcome within the last 24 months?

Contact us before resubmitting an application.

How is this application different?
(200 words max.)

Research summary

Research summary

Provide a summary of your proposed research, including key goals, for an expert audience.
(200 words max.)

The summary should be as complete as possible within the word limit. Include key words that best describe the proposal to enable text searching.

We will use this as a short abstract and to classify your proposal by subject. We may use it to describe your research on our website and elsewhere (we publish summary details of all our awards).

Lay summary

Provide a summary of your proposed research for a non-specialist audience. You don't need to oversimplify your research, but try to explain it as clearly as possible. Write in the first person ("I" and "we") and structure your summary in this order: background to the research problem; your approach; expected impact of your work.

We may use this to describe your research on our website and elsewhere (we publish summary details of all our awards).

Example of a lay summary

In response to stress and environmental changes, bacteria generate hundreds of small RNA molecules that have key roles in regulating gene expression. This process of riboregulation involves chaperone proteins that facilitate the actions of regulatory RNAs, and enzymes that affect RNA transcript lifetimes. I aim to understand the molecular basis of riboregulation by taking a multidisciplinary approach. I will use biochemical and structural analyses, including cryoEM and cryoET, to visualise how RNA transcripts are captured and channelled to active sites, either for degradation or processing. I will also identify the RNA targets of chaperone proteins and the degradative machinery, and explore whether the patterns change with physiological state or during the cell cycle, and why. These studies will help to explain how small RNAs enhance the speed and accuracy of bacterial genetic regulation, enriching the capacity of the simplest organisms to exhibit complex behaviour.

Details of research project

Duration of research project (months)

You should spend 18 months undertaking a research project.

Describe the research project you will undertake under the following headings:
(a) Aims and research question(s);

- (b) Work which has led up to the project;
- (c) Approach and methods to be used;
- (d) Key stages in your research plans, indicating location and timelines, and;
- (e) Relevance of the project to the low- or middle-income setting.

Do not exceed **1,400** words.

Your research project must be within the Science remit. The Master's Fellowship scheme aims to strengthen scientific research capacity in low- and middle-income countries by providing support for junior researchers to gain research experience combined with high-quality research training at Master's degree level.

The word count must not exceed 1,400 words in total, excluding graphs, figures. You may provide your answer to this question in text entry format or as a PDF attachment. If you are uploading your research vision, the uploaded document must be in 11 point Arial font and portrait format.

Research questions

State what you consider to be the key question(s) that you are addressing. For research that is not driven by an underlying hypothesis, state the impact of the proposed studies.

Approach and methods to be used

You should provide details of experimental design for animal studies as part of the justification for animals in the 'Proposals involving animals' section of the form.

For epidemiological, demographic, case control, cohort and related studies, give a full and detailed analysis of the study design. Include details of any validation already undertaken or rationale for using standard protocols. You should give particular attention to power calculations, sample size justification and, where appropriate, case definition and inclusion/exclusion criteria.

If you are requesting support for a clinical trial, you must provide full details, including study design, in the 'Details of studies involving human participants' section of the form.

Additional information

Figures and additional information cannot exceed 2 A4 pages. Embed it in your upload for your research vision or upload it under 'Additional information'. If you choose to embed this information, any text present (such as legends, labels, or captions) can be excluded from the word count. If it exceeds two pages of A4 we will return your application to you to reduce the amount of information.

You must provide all information pertinent to your grant proposal within the application form. Do not refer to additional unpublished information on personal websites.

(1400 words max.)

Does your proposal involve human participants?

Does your proposal involve a clinical trial?

The World Health Organization defines a clinical trial as: “any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes. Interventions include, but are not restricted to, drugs, cells and other biological products, surgical procedures, devices, behavioural treatments, process-of-care changes, preventive care, etc.”

For further information, refer to the Wellcome Trust’s clinical trials policy statement.

If your proposal involves a clinical trial, you should provide details of it within this application form. If your proposal involves more than one clinical trial, please contact the Wellcome Trust for guidance.

Details of studies involving human participants including clinical trials

Describe the study design. This should include, as applicable:

- number of participants in each group;

- type, frequency and duration of interventions and/or health outcome measures;
- frequency and duration of planned follow up;
- any other activity with potential significant risks to participants;
- details of any investigational product, focusing on manufacture, quality and consistency.

(300 words max.)

Types of health outcomes or interventions can include but are not restricted to:

- *screening procedures*
- *collection of biological samples*
- *biometric and clinical data*
- *experimental challenges*
- *behavioural treatments*
- *process-of-care-changes*

What are the primary and secondary outcome measures, and how will you assess these?

(200 words max.)

Outline the strategy for recruitment and describe the inclusion/exclusion criteria for study participants (if applicable). What are the proposed arrangements for allocating participants to study groups?

(200 words max.)

Detail and justify the power calculation, sample size and proposed statistical analysis, including any interim analyses and/or subgroup analyses. What are the proposed methods for protecting against sources of bias?

(200 words max.)

Describe the supporting personnel and infrastructure that will be used to deliver the proposed research (for example key support staff, roles of team members, participating centre(s) or facilities). Detail any activity a third party is undertaking, and explain what agreements or formal contracts will be in place.

(200 words max.)

How have you involved patients, participants, patient advocacy groups or communities in developing this proposal?

(200 words max.)

Additional information

Figures and additional information cannot exceed 2 A4 pages.

You can upload additional information here or embed it in your upload for your proposal. If you choose to embed this information, any text present (such as legends, labels, or captions) can be excluded from the word count. If it exceeds two pages of A4 we will return your application to you to reduce the amount of information.

References

Give the citation in full, including title of paper and all authors.

You may provide up to the equivalent of two A4 pages of references. Ensure that your references are pertinent to your research proposal and are cited in full, including all authors, the full title of each publication, journal title, year, volume and pages. For citations to preprints, state "Preprint", the repository name and the article persistent identifier (e.g DOI).

You can shorten references with more than 10 authors to et al, but you must ensure that your position as author (if applicable) remains clear.

Are there any papers listed in your 'References' section as being "in press" that you wish to submit to us?

Upload papers "in press" as a single PDF.

Outputs management and sharing

Will the proposed research generate outputs of data, software, materials or intellectual property that hold significant value as a resource for the wider research community?

Our Data, Software and Materials Management and Sharing Policy states that all Wellcome-funded researchers must manage their research outputs in a way that will achieve the greatest health benefit, maximising the availability of research data, software and materials with as few restrictions as possible. If your proposed research is likely to generate significant outputs - data, software, materials and/or intellectual property - that will hold clear value as a resource for others in academia or industry, you are required to provide an outputs management plan.

Select the approach you will use to maximise the impact of your significant research outputs to improve health and benefit the wider research community.

Provide an outputs management plan

Our guidance on developing an outputs management plan sets out where such a plan is required and gives an overview of what you must consider.
(700 words max.)

Your plan must be clear, concise, proportionate and focus specifically on how you will identify outputs, manage these and then use them to advance potential health benefits. Set out and address clearly the following:

1) For significant data, software and materials outputs

- (i) What significant outputs will your research generate?*
- (ii) When do you intend to share these outputs?*
- (iii) Where will you make these outputs available?*
- (iv) How will they be discovered and accessed by others?*
- (v) Are limits on sharing required?*
- (vi) How will these outputs be preserved?*

2) For intellectual property outputs

- (i) What IP will your research generate?*
- (ii) How will you protect this IP?*
- (iii) How will the IP be used to achieve health benefits?*
- (iv) Provide the name and contact details for the person in your organisation (e.g. Technology Transfer Officer or Business Development executive) who can act as a point of contact for Wellcome in connection with the protection and commercialisation of this IP.*

3) Describe any resources that you will need to deliver your outputs management plan.

Regardless of whether or not a plan is required, you must ensure that data and original software underlying published research findings are accessible at the point of publication.

Public engagement

How could members of the public and non-academic communities, inform, use, or find value in your research?
(250 words max.)

We want to foster a culture that values, recognises and better supports public engagement with research. Successful applicants are encouraged to apply for additional funds to support their engagement plans through our Research Enrichment scheme. Further information on the scheme and on Wellcome's approach to public engagement is available on our website.

Engagement that is essential for the ethical conduct of your research, such as patient information leaflets or community advisory boards, should be part of your research methodology. You should include costs for this within your main research costs.

Have you discussed your ideas and plan with your institutional Public Engagement Officer (if you have one?)

Answers to this question are for monitoring purposes only. You will not be penalised for answering 'no'. However, we strongly recommend you utilise any institutional public engagement support available in planning your approach.

Location of activity

Will the funded activity take place at more than one location?

List any locations outside of your administering organisation where you will be conducting research or redirecting funds. This includes, but is not limited to, anywhere in receipt of indirect funding, fieldwork sites, and time spent working in another organisation. This does not include conference attendance.

For each location, select the country and, where applicable, state the organisation. You must include the administering organisation.

Enter the approximate percentage of the total funds that will be spent in each location. Enter zero for locations where activity will take place but no significant funds will be spent. If you are requesting salary costs, attribute them to the employing organisation.

Country	Organisation	Percentage of funds

Costs requested

Select the currency in which you want to apply

Submit costs in the currency you think will best enable you to undertake the activity. This will probably be your local currency; if not, explain why not.

If you think that the currency may not be readily available, email grantpayments@wellcome.ac.uk. For more information see our website.

If we cannot award in the currency requested, we will talk to your administering organisation about using another.

Is this your local currency?

What is your local currency?

Explain why you are requesting costs in the selected currency and what exchange rate you have used.
(100 words max.)

Costs outline

The award is for a fixed sum of £120,000 over 30 months (unless held on a part-time basis). The total cost on the grant should equal £120,000 or the equivalent in the requested currency.

Applicant's salary costs (including employer's contributions)	
Stipend	
Master's fees	
Research expenses	
Total	

Upload the employing organisation's pay scales relevant to the salaries requested. If there is more than one pay scale, upload these as a single PDF.

Full economic costing

Is your organisation based in the UK?

Is your organisation calculating the full economic cost of this proposal?

What is the total full economic cost of your research proposal (£)?

Include inflation in your costs at the percentage rate currently used by your administering organisation.

Research involving human participants, human biological material and identifiable data

Does your project involve human participants, human biological material, or identifiable/potentially identifiable data?

The following notes relating to 'Research involving human participants, human biological material and identifiable data' are intended to provide guidance and advice in completing the form, rather than a comprehensive review of the legal and regulatory environment in which the application is made.

The World Health Organization defines research with human subjects as "any social science, biomedical, behavioural, or epidemiological activity that entails systematic collection or analysis of data with the intent to generate new knowledge, in which human beings i) are exposed to manipulation, intervention, observation, or other interaction with investigators either directly or through alteration of their environment, or ii) become individually identifiable through investigator's collection, preparation, or use of biological material or medical or other records."

Our policy position on research involving human participants can be found on our website.

We require ethical approval (usually from the appropriate National Health Service (NHS) research ethics committees) for all research we fund involving human participants, biological samples or personal data. Personal data (as defined in the Data Protection Act 2018) is any information relating to an identified or identifiable living person i.e. a person who can be identified either directly from that information or indirectly by combining it with other available information. Any use of personal data or biological samples, relating to living or dead persons, should conform to MRC guidelines available at: http://www.highlights.rsc.mrc.ac.uk/PIHR/index.html#/?_k=opxohv and <https://mrc.ukri.org/publications/browse/human-tissue-and-biological-samples-for-use-in-research/>.

You should seek approval from other regulatory bodies such as the Human Fertilisation and Embryology Authority (HFEA) or the Gene Therapy Advisory Committee in the UK where necessary, e.g. research involving human embryos may require a licence from the HFEA (please refer to www.hfea.gov.uk for more information). If your proposal involves research on gene therapy which requires regulatory approval, you should seek this from your Local Research Ethics Committee, the University's Genetic Manipulation Committee, the Gene Therapy Advisory Committee and the Medicines and Healthcare products Regulatory Agency (MHRA).

The organisation must ensure that ethical approval is in place at all relevant times during the project. For research carried out at multiple sites, ethics committee approval must cover each site.

Where the research, or part of the research, is to be performed outside the UK, independent ethics review must be obtained. For research involving people living in low and middle income countries, see the Wellcome Trust's website.

Confirm that you have read our guidance on the feedback of health-related findings in research (available on our website) and that you are in the process of considering your approach to this.

Who has, or will, review the ethics of the project and when? Detail any other regulatory approvals you have obtained, or will seek.

We reserve the right to see relevant approval documents at any point during the lifetime of the grant, in accordance with our policy position on research involving human participants.

Do you propose to use facilities, staff or patients within the National Health Service (NHS) in the UK?

By agreeing to fund work which requires NHS support, the Wellcome Trust is agreeing to abide by the Statement of Partnership on Non-commercial R&D in the NHS in England (and the corresponding statements in Northern Ireland, Scotland, and Wales). Researchers must therefore meet the obligations of the Partnership and may not carry out any research until the NHS has given its consent.

The Research Governance Framework for Health & Social Care, published by the Department of Health in England can be downloaded from the Department of Health website. The Wellcome Trust cannot act as sponsor.

Have you completed a Schedule of Events Cost Attribution Tool?
This must be signed off by an AcoRD specialist. Download a template SoECAT here. See our webpage on Clinical research using NHS facilities for more information.

Explain why you have been unable to complete a Schedule of Cost Attribution Tool.
You can submit your SoECAT whilst we are reviewing your application but Wellcome cannot make a

funding decision without it. If you do not have a signed off SoECAT form your research will not receive HRA approval (or equivalent).
(100 words max.)

Is a formal sponsor required for the project, for example under the Medicines for Human Use (Clinical Trials) Regulations or the Research Governance Framework for Health and Social Care and equivalent guidance?

Which organisation(s) have agreed to fulfil this role? The Wellcome Trust cannot act as sponsor.

Confirm you have in place or you will seek appropriate informed consent to use any potentially commercially exploitable results from tissues or samples derived from human participants.

Please answer 'not applicable' if no potentially commercially exploitable results (based on human tissues or samples) will be produced during the course of the proposed research.

Is the proposed clinical trial covered by The Medicines for Human Use (Clinical Trials) Regulations in the UK?

Under the Medicines for Human Use (Clinical Trials) Regulations 2004, applicants must identify a sponsor (which will normally be either a university or NHS Trust) who fully understands the responsibilities and costs associated with assuming this role. The Wellcome Trust cannot act as sponsor.

Confirm that the trial will be registered on the International Standard Randomised Controlled Trial Number Register (ISRCTN), ClinicalTrials.gov, or on another register listed on the WHO International Clinical Trials Registry Platform (ICTRP).

Describe the oversight arrangements for the clinical trial (e.g. membership of Trial Steering Committee, Data Monitoring Board etc.)

Proposals involving animals

Select any of the following that apply to your proposed work:
(*Proposal involves the use of animals, Proposal involves the use of animal tissue, Neither of the above*)

The following notes relating to 'Proposals involving animals' are intended to provide guidance and advice in completing the form, rather than a comprehensive review of the legal and regulatory environment in which the application is made.

Applicants must refer to the Wellcome Trust's policy on the use of animals in medical and veterinary research on our website.

In all animal experiments we support, the principles of reduction, replacement and refinement will apply. In all experimental studies, applicants must actively consider:

- the complete replacement of live animals with tissues derived from either animals or humans;
- the possibilities of reducing the numbers of animals that need to be used;
- refining the experimental design in order to obtain the maximum amount of information from the minimum number of animals.

Refined methods in animal research are those which alleviate or minimise any adverse effects for the animals involved, and/or enhance animal welfare. Refinements may be applied at any stage in the life of an animal. Thus, refinement encompasses all aspects of a procedure, including:

- the source, transport, husbandry and environment of the animals involved;
- the experimental design (for example, the choice of species and the group size employed);
- the techniques applied;
- the end points of the procedures; and
- care of the animals before, during and after a procedure.

For further information regarding the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs), see www.nc3rs.org.uk

Monoclonal antibodies

The use of ascitic animals for monoclonal antibodies (mAb) production in vivo should only be proposed when in vitro attempts at mAb production have failed or the use of animals is considered justified for specific diagnostic or therapeutic products. You must give a full explanation if in vitro production methods are not considered to be suitable.

Select any of the following species you will use:
(Primate, Cat, Dog, Equidae, Pig, Genetically Altered Animals, Other animals)

The NC3Rs will review all applications involving the use of primates, cats, dogs and equidae animals, or their tissue/data.
All proposed research projects involving genetically altered mice are expected to consider the principles of welfare assessment set out on the NC3Rs website.

Select 'Add...' to enter the animal species and total numbers required (this may differ from the number to be purchased, maintained).

Animal species	Strain (if appropriate)	Total number required to carry out proposed work
-		

Provide a justification of the proposed sample size alongside details of the planned statistical analyses. Describe experimental design, including any plans to reduce bias such as blinding or randomisation if appropriate. You must include power calculations if appropriate. (1,000 words max.)

You may provide your answer to this question in the field provided (text entry format) or as a PDF attachment (upload format). If you are uploading your answer, the uploaded document must be in 11 point Arial font and portrait format.

For each species, you must ensure that adequate experimental detail is provided to justify both the use and number of animals. This should include:

- definition of unit of analysis (i.e. N referring to animal or sample number);
- means of avoidance of bias (e.g. blinding or randomisation);
- statistical analysis to be used and explanation of how sample and/or group size was derived;
- where repeated measures are used, the number of time points;
- an indication of number of replications of each experiment to mitigate spurious non-replicable results.

You may include tables and figures in this section to help justify animal numbers. You can find additional guidance on

designing animal experiments through the NC3Rs Experimental Design Assistant.

(1000 words max.)

Why are the species to be used the most appropriate?
(250 words max.)

It is particularly important to justify the species when an animal is being used as a model for a human physiological or pathological condition.

Does your proposal include procedures to be carried out on animals in the UK which require a Home Office licence?
Your organisation must ensure that research involving the use of animals complies at all times with UK laws and regulations.

Is there a current Home Office Personal Project Licence (PPL) that authorizes the proposed procedures to be carried out in the UK?

Provide the name of the licence holder and the PPL number.

Detail your plans and timelines for acquiring the appropriate licence.

If your proposal involves the use of animals, what would be the severity of the procedures?
You can find guidance on assessing the severity of a procedure on the Home Office website.

Provide details of any moderate, severe or non-recovery procedures.
(250 words max.)

Does your proposal involve the use of animals or animal tissue outside the UK?

Confirm that the proposed animal work outside of the UK will comply with the principles of UK law. Animal research conducted outside the UK must, as a minimum standard, be carried out in accordance with the principles of UK law and regulation.
(1000 words max.)

Law and regulatory standards often vary from country to country. If experiments are to be carried out on animals outside the UK, the experiments proposed must be performed to standards which accord with the principles of UK legislation. Furthermore, the housing and care of animals must similarly accord with the standards and principles of UK legislation.

You should refer to NC3Rs guidance on carrying out work abroad and choosing contractors.

Why is animal use necessary: are there any procedures of less severity that could be used?
(250 words max.)

Non-human primates If you are exclusively using already generated tissue or data in the proposed experiments answer all relevant questions as thoroughly as possible, in particular the questions relating to housing and procedures. If a question is not relevant you can answer 'N/A', but we may request additional information if necessary for assessment.

Do the facilities and practices, and the proposed research comply with the principles set out in the 'National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) Guidelines: Primate accommodation, care and use' ?

Explain why not

Will it be necessary to transport the non-human primates (i.e. from breeding facility and within the host organisation environment)?

Indicate approximate journey times and the measures that will be taken to minimise the potential stress during transport.

Provide details of the housing for the animals, e.g. enclosure size, environmental enrichment.

See the NC3Rs guidance on animal housing and husbandry for further details.

Will single housing of the non-human primates be necessary at any time?

Provide a justification for single housing, its duration, and explain what additional resources you will provide to the animals to minimise the impact on animal welfare.

Describe the experimental procedures involved and how any pain, suffering, distress and/or lasting harm will be minimised. Have the procedures been recently reviewed by the Named Veterinary Surgeon (NVS), Named Animal Care and Welfare Officer (NACWO) and Animal Welfare and Ethical Review Body (AWERB)?

Will any of the experimental procedures involve food and/or water restriction?

Justify why this is necessary and outline what alternatives have been considered.

Will any of the experimental procedures involve restraint?	
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What alternatives have been considered? Describe the nature of the restraint, its duration and frequency, and what will be done to avoid distress.

What prior experience and training in non-human primate use, care and welfare will you require of the staff named in the application? What provision are you making for continuing professional development in these areas?

Will any of the staff involved require specific training for any of the procedures concerned?	
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Provide details of the training needed and where it will be undertaken.

Cats, Dogs, Equidae and Pigs If you are exclusively using already generated tissue or data in the proposed experiments answer all relevant questions as thoroughly as possible, in particular the questions relating to housing and procedures. If a question is not relevant you can answer 'N/A', but we may request additional information if necessary for assessment.

From where will the animals be sourced?

Will it be necessary to transport the animals?	
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Indicate approximate journey times and the measures that will be taken to minimise the potential stress during transport.

Are animals to be imported?	
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Where animals are to be imported, what journey times have been agreed with the Home Office? Describe the conditions for the animals at the breeding establishment and how the potential stress during transport will be minimised.

Provide details of the housing for the animals, e.g. enclosure size, environmental enrichment.
<i>See the NC3Rs guidance on animal housing and husbandry for further details.</i>

Will single housing of the animals be necessary at any time?	
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Provide a justification for single housing, its duration, and explain what additional resources you will
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provide to the animals to minimise the impact on animal welfare.

Describe the experimental procedures involved and how you will minimise any pain, suffering, distress and/or lasting harm. Have the procedures been recently reviewed by the Named Veterinary Surgeon (NVS), Named Animal Care and Welfare Officer (NACWO) and Animal Welfare and Ethical Review Body (AWERB)?

What adverse effects might the animals experience? List the clinical and other signs that will be monitored, the frequency of monitoring and, where relevant, the humane endpoint criteria established for the study.
(1000 words max.)

Will any of the experimental procedures involve restraint?

What alternatives have been considered? Describe the nature of the restraint, its duration and frequency, and what will be done to avoid distress.

What prior experience and training in animal use, care and welfare will you require of the staff named in the application? What provision are you making for continuing professional development in these areas?

Will any of the staff involved require specific training for any of the procedures concerned?

Provide details of the training needed and where it will be undertaken.

Risks of research misuse

Confirm that you have considered whether your proposed research could generate outcomes that could be misused for harmful purposes.

Wellcome encourages applicants and their host organisations to consider carefully any risks that the potential outcomes (information, products or technologies) of the research could be misused for harmful purposes. These include actions that pose a significant threat to humans, animals, plants or the environment - including terrorist misuse.

Examples of possible research areas that are associated with dual-use risks of this type, include (but are not restricted to) research that aims to:

- *demonstrate how to render a vaccine ineffective*
- *confer resistance to a therapeutically useful antibiotic or antiviral agent*

- enhance the virulence of a pathogen or renders a non-pathogen virulent
- increase the transmissibility or alter the host range of a pathogen
- enable the evasion of diagnostic and detection methods
- enable the weaponisation of a biological agent or toxin
- generate or reconstitute an eradicated or extinct agent or toxin

Have you identified any tangible risks of this type?

Briefly describe these risks and explain how you and your organisation will manage them.
(250 words max.)

Where you judge there are **tangible** (real and non-hypothetical) risks that the proposed research **will itself** generate outcomes that could be misused to cause harm, you (and your fellow researchers and host organisations) must take appropriate steps to monitor the research as it proceeds and minimise these risks. Risk mitigation could include establishing a process to review dual use risks on an on-going basis through the project and to gain independent expert advice as appropriate. You must also ensure that all members of your team are aware of these risks in progressing their research, and receive appropriate education and training on these issues.

The identification of tangible risks in a research project should be clearly balanced against the benefits and value that is to be gained for health, science and society. We recognise that most research could conceivably generate results that might hypothetically be misused at some point in the future, and we are not asking applicants to appraise these kinds of remote and hypothetical risks.

Refer to the joint BBSRC, MRC and Wellcome policy and position statement on managing risks of research misuse, and our guidelines on good research practice.

Freedom to operate/conflicts of interest

Describe any freedom to operate or other intellectual property related issues that might affect your ability to carry out the proposed research and/or to use, share or commercialise the research outputs. Explain how you will address these.

In particular, consider the following:

- Will your research use technology, software, databases, materials or patented inventions that are owned or controlled by others and which you do **not** already have written permission to use?
- Will the ownership, use, commercialisation and/or sharing of research outputs with the wider research community, be subject to agreements with commercial, academic or other organisations? This includes arrangements with collaborators named in this application.

(250 words max.)

Refer to Clause 8 of our Grant Conditions at www.wellcome.ac.uk/funding/managing-grant/grant-conditions.

Disclose all relevant information pertinent to your grant proposal, including proprietary information where appropriate, to provide the most comprehensive picture of how any commercial/IP matters may affect the delivery of your proposed research and the subsequent use, commercialisation and/or sharing of your research outputs.

If you are satisfied that there are no issues, enter N/A. If you have fully addressed such issues in your outputs management plan under the question on "Outputs management and sharing", then you may refer to that answer.

Describe any conflicts of interest which might affect your ability to carry out the proposed research and/or to share or commercialise the research outputs. Explain how you and your organisation will manage these and how you will comply with your organisation's requirements in relation to conflicts of interest.

In particular, consider the following: Does anyone involved in your project hold any consultancies, advisory roles, or equities in, or directorships of, companies or other organisations that might have an interest in the results of your proposed research?

Confirm in each case whether the conflict has been disclosed to your organisation.
(250 words max.)

Refer to our policy on conflicts of interest related to Wellcome-funded researchers and commercial organisations: www.wellcome.ac.uk/funding/managing-grant/policy-relationships-between-trust-funded-researchers-and-commercial-organisations.

If you are satisfied that there are no issues, enter N/A.

Wellcome Trust supported facilities

Will the project be based in one of the following Wellcome Trust supported facilities:

- the Wellcome Trust Sanger Institute
- a Wellcome Trust Centre
- an Africa and Asia Programme
- the Francis Crick Institute?

Specify